



# Wireless Temperature Monitoring



# System Overview

## Advantages of Monitoring with System5

- Reduce energy costs through efficient plant optimisation
- Improve product quality with comprehensive process monitoring
- Control wastage costs with 24 hour remote alarm system
- Alleviate audit stress with easy to access current and historical records
- Eliminate time spent taking manual readings
- Reduce errors resulting from manual checks
- Monitor and analyse environments with readily accessible reports

## System5 is IceSpy®'s latest flexible and reliable wireless monitoring system.

Over 16 years of knowledge, experience and expertise of wireless monitoring has been invested in **System5**, giving you the confidence of installing a system that will meet your every need. IceSpy® products have built in monitoring for temperature, humidity and door events. With **System5**, you can add sensors to monitor many other parameters such as gases, flow rates, pressure or pH levels.

## What does System5 Monitor?

**System5** is used to monitor fridges, cold rooms, storage facilities, vehicles, warehouses, laboratory equipment such as -80°C freezers and incubators, and manufacturing processes.

The system consists of **Scout** transmitters that log, store and wirelessly send readings to the **BasePlus** unit. Data can be downloaded to either a single PC, IT network, or to the Internet. **Echoes** can be used to extend the range of the system.



# System Features

## Reliable & Secure Data

- Avoid costly, disruptive and complicated cable installations
- Easy system expansion or relocation; new sensors are automatically detected and easily set up
- 1km outdoor range, and one of the longest ranges available on a typical indoor site. Extendible using **Echoes**
- Built-in memory within transmitters and base unit ensure data integrity

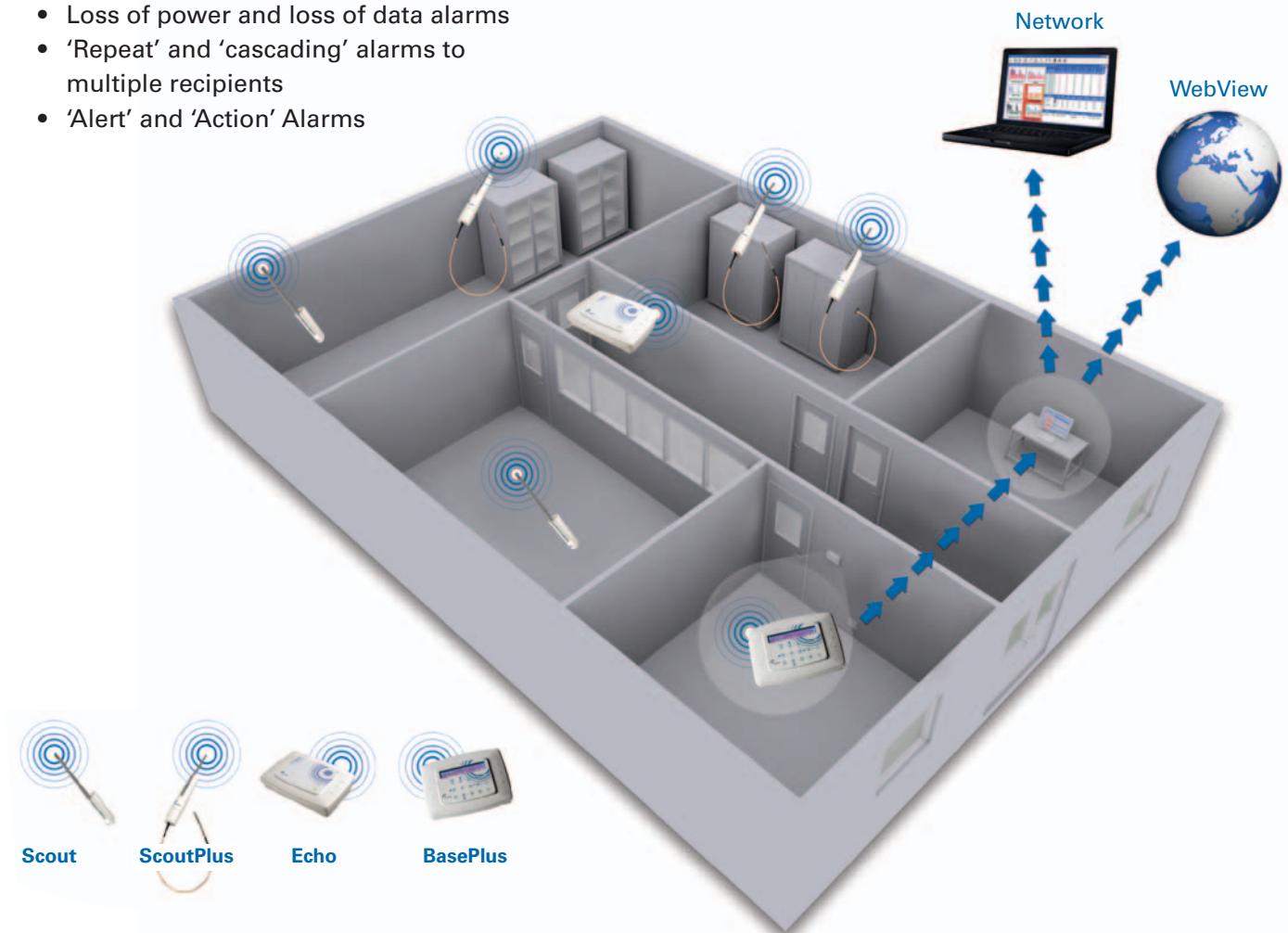
## Live & Continuous Monitoring

- Saves time taking manual readings
- No need to manually download data loggers
- Automatically gathers and stores readings from transmitters
- Live readings can be viewed at a glance on the **BasePlus**, PC or on the web

## Flexible Alarm Options

The need to receive reliable and timely alarms is critical. **System5's** alarm features have been developed to cover almost every eventuality and requirement:

- Visual and audible alarms on **BasePlus** unit and on PC
- Remote alarms by text message, email, switchboard, BMS
- Alarms can be scheduled for specific users, departments, times of day, or days of week
- Loss of power and loss of data alarms
- 'Repeat' and 'cascading' alarms to multiple recipients
- 'Alert' and 'Action' Alarms





# System Features *continued*

## Easy Data Access and Reporting

- Data from multiple sites or departments can be managed by a single system
- Data is easily viewed and managed in user friendly software
- Reports and graphs can be easily created and exported to a variety of formats, e.g. Excel, PDF and HTML
- Single or multi user software
- Automatically calculate industry specific parameters, such as 'mean kinetic temperature', 'pasteurisation rates' and 'dewpoint'
- Site plan view



## Assists Regulatory Compliance

MHRA

CPA, 21CFR Part 11

ISO9001/2008

Human Tissue Regulations

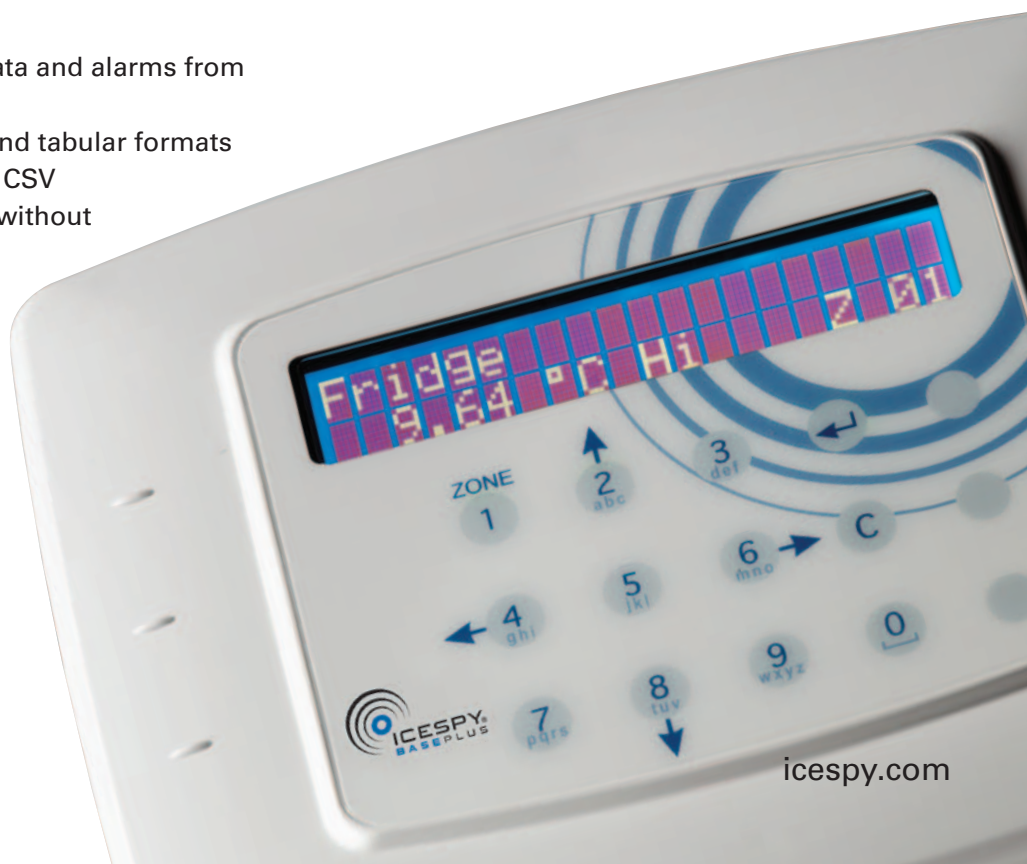
HACCP

The 'Extra-Secure' software version is used extensively by the pharmaceutical industry to help meet US Food & Drug Administration 21CFR Part 11 regulations. It offers maximum system security with special features such as full audit trails, electronic signatures and enhanced data and access security.



## Web Access

- Access your latest **System5** data and alarms from anywhere via the internet
- View latest data in graphical and tabular formats
- Print, or export data to PDF or CSV
- Investigate new alarm events without having to travel to site
- View and acknowledge alarm events remotely (automatically updates your local System5)
- View and acknowledge connectivity alarms (transmitters and internet connections)







# System Information

## Measurement

Internal Sensor	-40°C to +70°C	+/- 0.5°C	Optional calib +/- 0.2°C
External Probe	-80°C to +40°C	+/- 0.5°C (between -40°C to +85°C)	
Core Stimulant Probe (BS4376)	-30°C to +60°C	+/- 0.5°C	
PT100 External Probe	-200°C to +450°C	+/- 0.1°C to +/- 0.5°C	
Humidity	0% to 100% RH	+/- 2%	
Door Opening Events	Monitors total time a door has been open within given period		
Multiple Parameters (via a 4-20mA adapter)	E.g. CO <sub>2</sub> , pH, flow, Pressure		
Expected Battery Life	5 years (For continuous use of internal sensor above +30°C and below -25°C contact your supplier for advice)		
Waterproof and dustproof	IP68 (IP67 with external probe)		

## Wireless Communications

Radio Range	1000m (outdoors) extendible using Echo units
Mesh Networking	A mesh network can be created by adding additional Echo units
Radio Frequency & Power	433.9 MHz Licence Free, Max 10mW

## Data Storage & Communication

Memory	Scout & Base Unit have built-in memory to ensure data integrity
Connectivity	Ethernet, USB, RS232, Modem, BMS (relay/4-20mA output)
Power Backup	Built in backup batteries in Base and Echo ensure no loss data during periods of power loss
Database Format	Microsoft® SQL database allows integration with other systems

## Alarms

Alarm Events	High or low alarms triggered after user-defined delay period
Local Alarms	BasePlus Display, PC, strobe/sounder
Remote Alarms From Base	Text message, email, relay, voice call
Remote Alarm From PC	Text message, email, voice call
Other Alarm Features	Repeat, loss of data, multiple recipients, cascading, loss of power, remote cancellation
Alarm Scheduling	Alarms can be restricted to specific times of day, or days of week
Multiple site/department	Alarms can be sent to specific staff in charge of specific departments

## Software

Available in 3 versions: Compact, Network, and Extra Secure (21CFR)
Compatible with Windows Vista®, 2000®, XP Pro®, 2003 Server®, 2008 Server®, Windows 7
Web access using 'System5 WebView'



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